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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,319	10/03/2003	Syuuichi Hazama	SUG-020-USA-P	6421

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EXAMINER

MACKEY, JAMES P

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,319

Applicant(s)

HAZAMA, SYUUICHI

Examiner

James Mackey

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/3/2003;5/3/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

Art Unit: 1722

1. Figures 11A, 11B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 3 merely recites how the previously-recited structural elements (as defined in independent claim 1) are intended to be operated during the intended use of the claimed apparatus; however, intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530, and the manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235. Therefore, claim 3 does not recite additional structure for the apparatus and thus does not further limit the subject matter of the apparatus claims.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1722

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim **contrary to its ordinary meaning**, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “**cantilever**” in claims 1-7 is used by the claim to mean “supported at one end and in the middle”, while the accepted meaning is “a projecting structure supported at one end only.” The term is indefinite because the specification does not clearly redefine the term.

Further in claim 1, lines 2-3, “stationary mold of metal mold” is unclear; line 6, “the metal molds” lacks proper antecedent basis as a plurality; lines 8-9, “said approaching and deviating directions” lacks proper antecedent basis; line 18, “said electric motor” is indefinite as to which of the two electric motors is intended; lines 21-22, “a mold opening and closing mechanism having the structure mentioned above” is unclear and indefinite as to exactly what structure is intended; and line 24, “said stationary mold plate” lacks proper antecedent basis.

Claim 2 also includes each of the above indefiniteness as described in relation to claim 1.

In claim 3, line 4, “an outer side” is indefinite as to exactly where the outer side is located, since no point of reference has been recited to define “outer”. Moreover, claim 3 is indefinite as to exactly what structure is being claimed in addition to the structural elements

Art Unit: 1722

recited in independent claim 1, since claim 3 merely recites how the previously-recited structural elements are intended to be operated during the intended use of the claimed apparatus.

In claim 4, line 8, "said approaching and deviating direction" lacks proper antecedent basis in the claim; and line 13, "an injecting electric motor" is indefinite as to how this relates to the "electric motor for injecting" as recited in claim 1.

In claim 5, line 5, "the portion protruding" lacks proper antecedent basis; and lines 6-8, "the injection side fixed plate" lacks proper antecedent basis.

In claim 6, line 4, "another one set" is unclear (note that line 3 recites "one pair"); and line 6, "the injection side fixed plate" lacks proper antecedent basis.

In claim 7, lines 4 and 8, "the guide mechanism" lacks proper antecedent basis; lines 5-6, "the lower portion" lacks proper antecedent basis; line 7, "said movable plate" is indefinite as to which of the two movable plates is intended (it should apparently read --said injection side movable plate--); line 8, "the portion protruding" lacks proper antecedent basis; and line 11, "is transmitted to the portion" is indefinite as to which structure is intended.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 1722

2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 2000-94488 in view of any one of Ueno (U.S. Patent 4,984,980; col. 4, lines 11-36; col. 9, lines 37-47), Inaba et al. (U.S. Patent 6,179,607; col. 2, lines 26-34; col. 4, lines 38-39), Ziv-Av (U.S. Patent 6,186,770; col. 5, lines 55-57; col. 6, line 40-44) and Wohlrab (U.S. Patent 6,851,942; col. 3, line 9; col. 5, lines 1-8).

Japan '488 discloses the motor driven injection molding apparatus substantially as claimed, including a center fixed mold plate 3, a movable mold plate 13, two ball screws 17, 18 for opening and closing the metal mold 11, 12 supported by the plates, the ball screws being supported at one end by the center fixed plate and passing through and cooperating with the movable mold plate, an electric motor 51 for rotating the ball screws for opening and closing the mold by moving the movable mold plate toward and away from the center fixed plate, and an injecting electric motor 52 arranged on a side of the center fixed plate opposite to the movable mold plate for driving resin into the closed mold by moving an injection side movable plate 33 and associated plunger 42 toward and away from the center fixed plate via injecting ball screws 37, 38. Japan '488 does not disclose the two ball screws for opening and closing the mold being unsupported at the end opposite to the end which is supported at the center fixed plate (as the recitation "in a cantilever state" in the instant claims can best be understood), with a slide guide receiving a lower portion of the movable mold plate. Each of Ueno, Inaba et al., Ziv-Av and Wohlrab discloses a motor driven injection molding apparatus comprising a fixed mold plate supporting ball screws at one end, a movable mold plate cooperating with the ball screws so as to

Art Unit: 1722

be movable in an opening and closing direction, the opposite ends of the ball screws being unsupported, and the movable mold plate movable along slide guides. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Japan '488 by providing the mold opening/closing ball screws as unsupported at end opposite the ends at which the ball screws are supported on the fixed mold plate, and by providing the movable mold plate as movable along slide guides, as disclosed in any one of Ueno, Inaba et al., Ziv-Av and Wohlrab, since such a two-platen clamping mechanism is equivalent to the three-platen clamping mechanism of Japan '488, and since such a two-platen clamping mechanism allows a more compact injection molding machine.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

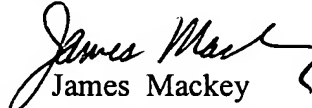
Bluml et al. (U.S. Patent 5,110,283, cited by Applicant) discloses motor driven ball screws which are supported at one end by the fixed mold plate and which cooperate with a movable mold plate, wherein the ball screws are unsupported at the opposite end (Figure 7). Tamaki et al. (U.S. Patent 6,537,057), Morita et al. (U.S. Patent 6,561,785) and Schenk (U.S. Patent 4,702,688) each disclose mold platen driving means including ball screws. Kappelmuller et al. (U.S. Patent 6,793,482) and Maurilio (U.S. Patent 6,682,338) disclose ball screw driving means for injecting resin into a mold.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:30-5:00.

Art Unit: 1722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James Mackey
Primary Examiner
Art Unit 1722

9/29/05

jpm
September 29, 2005